U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

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LEAD IN MAY 1996

Primary refinery production was down about 4% and secondary refinery production was up about 1% in May in comparison with production in the previous month. Compared with that of May 1995, primary production was down by nearly 16% and secondary production was up by about 13%. Reported consumption in May increased by about 1.2% compared with that of April.

The monthly average *North American* producer price, published by *Platt's Metals Week*, was about the same as in April. The average London Metal Exchange (LME) cash price resumed its upward trend in May, after a slight decline in April, increasing by about 3% from that of the previous month.

National Defense Stockpile cash disposals of lead in May 1996 were 1,260 metric tons (1,389 short tons). Cash disposals of lead to date in fiscal year 1996 (October 1995 through May 1996) were 21,615 metric tons (23,826 short tons).

Seafab Metal Corp., Seattle, WA, reported plans to build a new lead oxide production plant in southern California, capable of producing 8,000 to 10,000 short tons of lead oxide annually. Currently Seafab is shipping oxide from its Seattle plant to lead-acid battery manufacturers in California and would prefer to be closer to the growing market of its customers. A Seafab spokesman indicated that the company presently is reviewing a number of possible sites for the new plant. Seafab hopes to have the new plant operating by late 1996 or early 1997 and, in the interim, will continue to ship oxide from its Seattle plant. In addition to its relocation plans, Seafab is also considering expanding to produce lead sheet, pipe, and other fabricated products at its new plant (American Metal Market, May 9, 1996).

Cominco Alaska Inc., operator of the Red Dog zinc-lead mine in northwestern Alaska, continued its

plans to increase mine production by nearly 40% over the next 3 years. The increase in production was made possible by the discovery in 1995 of the Aqqaluk ore body, which nearly doubled the reserves at Red Dog. About 850,000 metric tons of zinc concentrate and 90,000 metric tons of lead concentrate will be produced annually at the increased rate of production. The additional reserves will be sufficient to maintain operation of the mine at this higher rate for at least 40 years (*Metal Bulletin*, May 6, 1996).

RSR Corp., Dallas, TX, recently completed the expansion of its secondary lead production plant in Indianapolis, IN. Inclement weather earlier in the year had delayed the completion of the expansion. A second arc furnace and an additional bag house and scrubber unit are currently in the trial stage of operation, but this new equipment is expected to be in full operation during the last half of 1996 to produce an additional 12,000 short tons of lead at the plant. At RSR's Middletown, NY, secondary lead production plant, construction of a desulfurization unit is continuing. This unit will produce sodium sulfate crystals as part of the secondary lead processing scheme and is expected to be completed by the end of 1996 (American Metal Market, May 29, 1996). In other RSR actions, the company has created RSR Technologies, a new division devoted to research that will seek to improve lead smelting, refining, and fabricating methods. The new division, formed from RSR's existing Research and Development Department, will service RSR Corp. facilities and the European operations of its parent company, Quexco Ltd., as well as other parties, such as lead-acid battery manufacturers. (American Metal Market, May 15, 1996).

$\label{table 1} \textbf{TABLE 1} \\ \textbf{SALIENT LEAD STATISTICS IN THE UNITED STATES} \hspace{0.1in} 1/$

(Metric tons)

	1995 p/			1996	
	Year total	Jan May	Apr.	May	Jan May
Production:					
Mine (recoverable)	384,000	159,000 r/	35,900	37,800	181,000
Primary refinery 2/	374,000	159,000	28,600	27,500	152,000
Secondary refinery:					
Reported by smelters/refineries	737,000	307,000	65,300	66,000	315,000
Estimated	193,000	80,500	17,200	17,400	82,700
Recovered from copper-base scrap e/	15,000	6,250	1,250	1,250	6,250
Total secondary	945,000	394,000	83,700	84,700	404,000
Stocks, end of period:					
Primary refineries 2/	XX	XX	15,000	15,000	XX
Secondary smelters and consumers	XX	XX	50,300 r/	48,200	XX
Imports for consumption:					
Ore and concentrates (lead content)	2,590	2,470	1	NA	1,710 3
Refined metal	264,000	104,000	20,500	NA	87,600 3
Consumption:					
Reported	520,000 r/	350,000	68,900 r/	69,800	339,000
Undistributed e/	318,000 r/	227,000	42,200 r/	42,800	208,000
Total	838,000 r/	577,000	111,000 r/	113,000	547,000
Exports (lead content):					
Ore and concentrates	65,500	2,880	283	NA	2,050 3
Materials excluding scrap	57,200	23,900	10,600	NA	29,200 3
Ash and residues	8,040	2,750	1,820	NA	4,710 3
TEL/TML preparations, based on lead compounds	3,210	1,820	109	NA	320 3
Exports (gross weight): Scrap	105,000	37,700		NA	3
Platt's Metals Week North American producer					
price (cents per pound)	42.28	41.68	50.24	50.35	48.23

e/ Estimated. p/ Preliminary. r/ Revised. NA Not available. XX Not applicable.

TABLE 2 MONTHLY AVERAGE LEAD PRICES

	North American producer			Sterling	
	price	LN	ME	exchange rate	
	cents/lb	\$/metric ton	£/metric ton	dollars/£	
1995:					
May	41.39	596.05	375.50	1.587373	
Average Jan May	41.68	606.98 r/	382.23 r/	1.588292	
Year average	42.28	619.00	399.81	1.578176	
1996:					
February	46.59	769.24	500.82	1.535961	
March	48.73	817.29	535.20	1.527062	
April	50.24	814.55	537.29	1.516041	
May	50.35	839.76	554.21	1.515236	
Average Jan May	48.23	789.97	518.26	1.524614	

r/ Revised.

Source: Platt's Metals Week.

^{1/} Data are rounded to three significant digits, except prices; may not add to totals shown.

^{2/} Source: American Bureau of Metal Statistics, Inc. (ABMS).

^{3/} Includes data for January-April only; May data not available at time of publication.

${\bf TABLE~3}$ MINE PRODUCTION OF RECOVERABLE LEAD IN THE UNITED STATES ~1/

(Metric tons)

	1995	p/		1996		
	Year total	Jan May	April	May	Jan May	
Missouri	290,000	119,000	27,700	28,300	136,000	
Other States 2/	93,900	39,300 r/	8,200	9,490	45,500	
Total	384,000	159,000 r/	35,900	37,800	181,000	
Daily average 3/	1,050	1,050 r/	1,200	1,220	2,410	

p/ Preliminary. r/ Revised.

- 1/ Data are rounded to three significant digits; may not add to totals shown.
- 2/ Includes Alaska, Colorado, Idaho, Montana, and New York.
- 3/ Based on number of days in period without adjustment for Sundays or holidays.

 $\label{table 4} TABLE~4$ CONSUMPTION OF PURCHASED LEAD-BASE SCRAP IN MAY 1996 1/

(Metric tons, gross weight)

	Stocks			Stocks
	Apr. 30,	Net		May 31,
Item	1996	receipts	Consumption	1996
Battery-lead	32,800	75,200	75,200	32,800
Soft lead	W	942	942	W
Drosses and residues	W	7,090	7,050	W
Other 2/	3,410	2,600	2,620	3,440
Total	36,200	85,800	85,800	36,200
Percent change from preceding month		+3.4	+1.5	

W Withheld to avoid disclosing company proprietary data; included in "Other."

TABLE 5 LEAD, TIN, AND ANTIMONY RECOVERED FROM LEAD-BASE SCRAP IN MAY 1996 $1/\,$

(Metric tons)

	Secondar	ry metal conten	t
Product recovered	Lead	Tin	Antimony
Soft and calcium lead	33,800		
Remelt lead	\mathbf{W}	W	W
Antimonial lead	18,400	W	539
Other 2/	W	W	W
Total lead-base	66,000	48	761

W Withheld to avoid disclosing company proprietary data; included in "Total."

- 1/ Data are rounded to three significant digits.
- 2/ Includes cable lead, lead-base babbitt, solder, type metals, and other products.

^{1/} Data are rounded to three significant digits; may not add to totals shown.

^{2/} Includes solder, common babbitt, antimonial lead, cable covering, type metals, and other lead-base scrap not elsewhere classified.

${\bf TABLE~6}$ CONSUMPTION OF LEAD IN THE UNITED STATES ~1/

(Metric tons)

	1995			1996	
Uses	Jan Dec. p/	Jan May	Apr.	May	Jan May
Metal products:					
Ammunition-shot and bullets	48,600 r/	24,700	3,150	3,090	19,200
Bearing metals	W	W	W	W	W
Brass and bronze-billet and ingots	6,110	2,710	547	535	2,640
Cable covering-power and					
communication and calking lead-					
building construction	5,600	2,660	511	553	2,720
Casting metals	1,240	W	107	144	592
Pipes, traps, and other extruded					
products	912	405	W	W	150
Sheet lead	11,100	4,280	698	743	3,910
Solder	6,250	2,750	435	455	2,400
Storage batteries, including oxides	379,000 r/	288,000	61,700 r/	62,400	295,000
Terne metal, type metal, and other					
metal products 2/	5,500	3,020	629	601	3,110
Total metal products	464,000 r/	329,000	67,800 r/	68,600	330,000
Other oxides	44,700	18,900	(3/)	(3/)	4,250
Miscellaneous uses including gasoline					
additives	10,700 r/	2,120	1,110 r/	1,170	4,890
Total reported	520,000 r/	350,000	68,900 r/	69,800	339,000
Undistributed consumption e/	318,000 r/	227,000	42,200 r/	42,800	208,000
Grand total	838,000 r/	577,000	111,000 r/	113,000	547,000

e/ Estimated. p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Terne metal, type metal, and other metal products."

TABLE 7
CONSUMER AND SECONDARY SMELTER STOCKS, RECEIPTS, AND CONSUMPTION OF LEAD IN MAY 1996 1/

(Metric tons, lead content)

	Stocks			Stocks
	Apr. 30,	Net		May 31,
Type of material	1996	receipts	Consumption	1996
Soft lead	14,300 r/	38,200	39,000	13,500
Antimonial lead	24,000 r/	23,100	23,100	24,000
Lead alloys	W	5,970	7,210	W
Copper-base scrap	W	442	442	W
Total	50,300 r/	67,700	69,800	48,200

r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Total."

$\label{eq:table 8} {\bf CONSUMPTION~OF~LEAD~BY~CLASS~OF~PRODUCT~AND}$ ${\bf TYPE~OF~MATERIAL~IN~MAY~1996~1/}$

(Metric tons, lead content)

	Soft	Antimonial	Lead	Copper-base	
Class of product	lead	lead	alloys	scrap	Total
Metal products	38,500	23,100	7,210	442	69,300
Other oxides 2/	W				W
Miscellaneous uses	443	W	W		443
Total	39,000	23,100	7,210	442	69,800

 $W\ Withheld\ to\ avoid\ disclosing\ company\ proprietary\ data;\ included\ in\ "Metal\ products."$

^{1/} Data are rounded to three significant digits; may not add to totals shown.

^{2/} Includes lead consumed in foil, collapsible tubes, annealing, plating, galvanizing, and fishing weights.

^{3/} Withheld to avoid disclosing company proprietary data; included in "Miscellaneous uses including gasoline additives."

^{1/} Data are rounded to three significant digits; may not add to totals shown.

 $^{1/\,\}mbox{Data}$ are rounded to three significant digits; may not add to totals shown.

 $^{2\!/}$ Includes ceramic products, glass, other pigments and chemicals, and paints.

TABLE 9 U.S. EXPORTS OF LEAD, BY CLASS 1/

(Metric tons)

	1995			1996	
	Year total	Apr.	Mar.	Apr.	Jan Apr.
Lead content:					
Ore and concentrates	65,500	206	174	283	2,050
Materials excluding scrap	57,200	6,190	8,540	10,600	29,200
Ash and residues	8,040	922	1,200	1,820	4,710
TEL/TML preparations, based					
on lead compounds	3,210	526	38	109	320
Total	134,000	7,840	9,950	12,800	36,300
Gross weight: Scrap	105,000	6,980			

^{1/} Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

 ${\rm TABLE~10}$ U.S. IMPORTS OF LEAD BY TYPE OF MATERIALS AND BY COUNTRY OF ORIGIN $\ 1/$

(Metric tons, lead content)

	General imports				Imports for consumption					
Country of origin	19	995 p/		1996		19	995 p/		1996	
	Year total	Jan Apr.	Mar.	Apr.	Jan Apr.	Year total	Jan Apr.	Mar.	Apr.	Jan Apr.
Ore, matte, etc.:										
Australia	1,480									
Bolivia	759	249	264		271					
Canada	106,000		23,700	37,400	120,000			1,070		1,200
Mexico	2,380	2,380		1	390	2,380	2,380		1	390
Peru	12,800	6,540	2,440		5,730	88	88			
Other	984	278			122	126				122
Total	124,000	9,440	26,400	37,400	126,000	2,590	2,470	1,070	1	1,710
Base bullion:										
Mexico	31					31				
Total	31					31				
Pigs and bars:	-									
Belgium	25	25				25	25			
Bulgaria	1,910	1,910				1,910	1,910			
Canada	182,000	57,200	14,900	13,200	59,700	182,000	57,200	14,900	13,200	59,700
Germany	3,140	1,660	29	(2/)	92	3,140	1,660	29	(2/)	92
Mexico	54,300	17,000	4,540	5,450	20,500	54,300	17,000	4,540	5,450	20,500
Netherlands	42	28				42	28			
Peru	22,100	5,400	699	1,800	7,190	22,100	5,400	699	1,800	7,190
Sweden	5	5				5	5			
United Arab Emirates	210	95	11	31	72	210	95	11	31	72
United Kingdom	128	32				128	32			
Venezuela	364	364				364	364			
Other	242	238			27	242	238			27
Total	264,000	84,000	20,100	20,500	87,600	264,000	84,000	20,100	20,500	87,600
Reclaimed scrap, including										
ash and residues	75		17	31	120	75		17	31	120
Grand total	388,000	93,400	46,500	57,900	214,000	267,000	86,500	21,200	20,500	89,400

p/ Preliminary. r/ Revised.

 $^{1/\,\}mbox{Data}$ are rounded to three significant digits; may not add to totals shown.

^{2/} Less than 1/2 unit.

